LIS636-201/202 Syllabus
LIS636-201/202 Foundations of Information Technology
Fall 2011 Online sections
Instructor: Joseph Miller, Associate Professor
Office: 343 LCLI (257-8854) jbmiller@uky.edu
Office hours: MW 1:00-4:00, TR 10:00–12:00 & by appointment (appointments encouraged)

Course Description
A study of the computing fundamentals needed for the understanding and use of information technology, which is essential to information professionals. Focus is on examining computer systems in concept and practice. Topics include how computers represent, process, store and retrieve information; how operating systems control these processes, interpret commands, present the user interface, and run applications; how databases are designed and created; how general understanding of programming processes and productivity software skills is important in a variety of professional contexts. Productivity applications include the Office suite, Internet applications and web publishing, and database management systems.

Course Objectives
To introduce the student to basic computer and IT concepts including hardware, software, operating systems, Internet protocols and HTML, database design and implementation, and IT security issues.

At the end of this course, students will:
• Have developed a conceptual and practical understanding of the computing fundamentals essential to information technology systems, including how computers represent, process, store and retrieve information, present the user interface, run useful applications, and interact in a networked world.
• Understand the function and role of operating systems in the management of computer processes and data, and how to effectively utilize them in both graphical and command-based environments.
• Have developed a knowledge base regarding computer hardware and software sufficient to make informed selection decisions and perform routine troubleshooting.
• Be familiar with general programming processes and developed basic script programming skills.
• Be familiar with database systems, systems analysis and modeling techniques (ERD and DFD), and normalization.
• Understand markup language concepts and graphics techniques to create HTML web pages and successfully upload them to a Unix based web server.
• Have developed competencies in some widely used productivity applications including Microsoft Word, Excel, PowerPoint, and Access as well as cloud computing.
• Be familiar with cloud computing applications.
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Textbook
The text is *Computer Concepts 2012: Comprehensive* by Julia Parsons and Dan Oja (ISBN 13: 978-0-538-74481-2). NOTE: this is a new text, but the previous edition *Computer Concepts 2011: Comprehensive* by Julia Parsons and Dan Oja (ISBN 13: 978-0-538-74481-2) will also be acceptable; the pagination appears to be the same, but I assume there might be some minor additions or changes to the new edition.

Additional Web Resources and requirements
Students will utilize various other materials are on the web as directed in each module; I have a Youtube channel at [http://www.youtube.com/jbmillerSLIS](http://www.youtube.com/jbmillerSLIS) with videos of interest. The publisher of our text also has a great web site you can register for at [http://login.cengage.com/cb/](http://login.cengage.com/cb/) where you can take practice quizzes and access other resources. There is also a University of Kentucky’s web based training page at [http://www.uky.edu/HR/etraining/](http://www.uky.edu/HR/etraining/).

You will also need to establish a Google account that you will use for several graded activities.

Grading
The grade for this course will be based on the following:
Module quizzes (8 @ 20 points each): 160 pts
Five projects worth a total of 140 pts
Class participation and other activities: 50 pts
Total: 350 pts.

Grading Scale:
100-92% (322-350 pts) = A
91-80% (280-322 pts) = B
79-70% (245-280 pts) = C

Quizzes
There is a quiz at the end of each module. Quizzes will be posted by noon of the day the module ends and will be available until the end of the day on the following day, allowing a 36-hour window to take the quiz. Note that technical problems can occur with BlackBoard quizzes and will be addressed on a case-by-case basis. Students are expected to do all quizzes without outside help and without consulting supporting materials; they are “closed book” quizzes. Quizzes will cover material from that module, which includes assigned readings, my lectures, and forum discussions for that module. Quizzes in BlackBoard will be timed and be presented as a single question at a time with no backtracking permitted.

Participation Points
Students are expected to participate in class discussion via the Discussion Boards and the class wiki. There will be several topics posted for each module, and students should also use the discussion board to bring up any topics they do
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not fully understand – all content related questions should be posted to a forum first instead of being sent directly to the instructor so others may benefit from the answer, whether it comes from a peer or the instructor.

There are 5 participation points available for each module for 40 points and an additional 10 points for module 1 activities for a total of 50 points. To earn 5 participation points in each module, you must make at least one substantive contribution to either the wiki or a discussion board forum during the time the module is active. Therefore, you cannot make advance posts before a module has started or post “make up” contributions after a module has ended. Discussion boards and the wiki close with the launch of the module quiz, which is always at NOON on the day the module ends. Discussion posts can be in the form of responding to one of my framing questions or initiating a discussion with a substantive post on a topic of interest as long as it is related to the module content where you offer your insights or new information to the class, or answering a content question from a peer. Wiki posts should be your attempt to define and explain some technology or concept that you encounter in the course. As a general guide, a “substantive” post to a forum or wiki page is one that goes beyond stating agreement with another or just passing along a link and generally must be at least 150 words (a short paragraph or more) of thoughtful commentary or related information.

There are another 10 participation points associated with other activities in module 1. These include: setup Google account, edit the Google site course web page and add a picture, subscribe to the course Youtube channel, and completing a self-assessment.

Projects
Please do not submit projects earlier than the start of the module in which they are due. All projects are due the day the quiz starts for the module they are associated with and can be submitted up to the end of the day the module ends (11:59 PM).

Project #1: An introduction to the functions and use of operating systems. We will examine HCI using command line operating systems (DOS, Unix) and graphical systems (Windows). Tasks include navigating directory structures and file management. 20 pts. DUE September 21
Project #2: Create your web page using HTML and upload to the sweb server. This basic page will be updated periodically by adding links to completed future projects. 25 pts. DUE October 5
Project #3: Productivity applications and cloud computing: (45 points) DUE Nov 2
  Part 1: Word processing - Create a newsletter from a given text file and share in Google docs.
  Part 2: Excel - An Excel exercise in which a library budget will be prepared along with appropriate graphs and charts; share in Google docs.
  Part 3: PowerPoint – a short PowerPoint slide show will be created and made available in Google docs.
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Project #4: An introduction to programming processes via text based command scripts. Batch files, simple JavaScript, and PHP scripts. 25 pts **DUE November 16**
Project #5 (25 points): Relational databases in Microsoft Access. **DUE November 30**

Course Calendar Summary
Module 2 – Operating systems: September 8 – 21. Project 1 due
Module 3 – Internet: September 22 – October 5. Project 2 due
Module 4 – Hardware: October 6 – 19.
Module 5 – Productivity: October 20 – November 2. Project 3 due
Module 6 – Programming and scripting: November 3 – 16. Project 4 due
Module 7 – Databases: November 17 – 30. Project 5 due

Course Module details:

**Module 1: Course Introduction** August 24 – September 7.
- Computing history
- Binary numbers and Boolean logic
Text Readings: Chapter 9, Section A, pages 486-96) and Chapter 1, pages 2-28 (Emphasis on section C)

Activity 1 DUE September 7.

**Module 2: Operating Systems** September 8 – 21. Project 1 due
- Functions of PC operating systems
- HCI via the command line, command syntax, and GUI
- Disk organization and directories; File names and extensions
- Introduction to Unix and Windows
- Secondary storage concepts and file systems
Text Readings – Chapter 4
Online:
*http://www.easydos.com/dosindex.html* commands
*hhttp://www.computerhope.com/msdos.htm*
Unix: [http://www.engr.uky.edu/unixhelp/index.html](http://www.engr.uky.edu/unixhelp/index.html)

**Module 3: Internet and the Web** September 22 – October 5. Project 2 due
- A brief history of the Internet
- Internet protocols
- Markup languages and HTML
- Unix and uploading files
- Web 2.0
Text Readings: Chapters 6 and 7
Other HTML Readings:
W3schools site: [http://www.w3schools.com](http://www.w3schools.com)
Module 4: computer hardware October 6 – 19.
Computer hardware systems: CPU cycles, RAM addressing, ROM, data bus.
- Input/output devices
- Graphics and displays
- Mass storage
- Mobile devices

Text Readings: Chapter 1, section D and Chapter 2

Module 5: Productivity software October 20 – November 2. Project 3 due
- Word, Excel, and Powerpoint

Text Readings: Chapter 3
Online: Google docs help

Module 6: Programming and scripting November 3 – 16. Project 4 due
- Programming processes, Software types and trends: compiled, interpreted, object oriented.
- Introduction to text based scripted command files.
- Batch files, replaceable parameters, flow of control; bat files, PHP and JavaScript examples

Text Readings: Chapter 12 sections A, B, C (pages 672-712)
Online readings:
* http://www.computerhope.com/batch.htm (section on batch files)
* http://www.robvanderwoude.com/ (section on batch files)
* http://www.w3schools.com/js/js_intro.asp (introduction to JavaScript)

Module 7: Database Systems November 17 – 30. Project 5 due
- Introduction to Database Management Systems
- Entity Relationship Modeling and Normalization
- Query languages (SQL)
- Access

Text Readings: Chapter 11
Online Readings:
* http://www.smartdraw.com/resources/centers/software/erd.htm ER models
* http://www.umsl.edu/~sauter/analysis/er/er_intro.html
* http://www.agilemodeling.com/artifacts/dataFlowDiagram.htm Dataflow diagrams
* http://www.oreilly.com/catalog/accessdata2/chapter/ch04.html Normalization
Extra and supplemental:
http://databases.about.com/library/weekly/aa080501a.htm
http://www.sqlmag.com/Articles/Index.cfm?ArticleID=4887&pg=1
http://www.databasejournal.com/sqletc/article.php/26861_1428511_4

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Viruses and malware
Internet security
Textbook:
Chapter 1 section E (pages 34-42)
Chapter 3 section E (pages 162-169)
Chapter 6 section E (pages 340-349)
Chapter 7 section E (pages 400-408)
Chapter 12 section E (pages 723-729)

Syllabus Part 2: Policies, systems used, and frequently asked questions.

Blackboard
We will use the Blackboard course management system to facilitate the class. Please visit http://www.uky.edu/Blackboard/ to learn about this system and the login requirements. There is a “test your computer” link at http://wiki.uky.edu/blackboard/Wiki%20Pages/Home.aspx that will tell you if your system has needed components for Blackboard.

Online Course Requirements:
You will need access to an appropriate computer with a broadband Internet connection. You must have audio capability to listen to the audio lectures and a headset/microphone (minimum) or a webcam (desirable) is needed for video conferencing. Note that all examples and project questions are Windows-based. This means that while you do not have to own a Windows PC, it is up to you to identify appropriate software replacements for the programs demonstrated if you use another platform (examples include an HTML editor and FTP and telnet clients). Other required software includes a current copy of Office Professional that includes Word, Excel, PowerPoint, and Access. Note that all UK students are eligible for a one time free download of Office 2007 from the UK download site (https://download.uky.edu) or you can buy a heavily discounted version of Office 2010. Either version is fine for the course and you can get help with this process from the UK helpdesk if needed. You should also have both the Firefox and IE browsers available to accommodate occasional BlackBoard issues. We make extensive use of Flash audio/visual materials, so you will also need the newest version of the Flash media player for both Flash presentations and for any use of the Adobe Connect web conferencing tool. Occasionally BlackBoard has problems with Flash content. Generally, Firefox or Internet Explorer should work, but if something is not working in one browser, you should be prepared to use an alternate one to see if that solves the problem.

NOTE to Apple users
This is a Windows-centered course, but you should be able to do most all activities with your Apple computer. However, there are course elements will require the Windows operating system. Apple computers can be setup to run Windows sessions either with the “boot camp” utility or by using VMware or you can simply elect to locate and use a Windows PC for those few parts of the course. In addition, I will make a Windows
computer available that you can connect to and use remotely from any Internet connected computer when needed.

Help
I will try to be available to assist as much as possible for this online experience. However, that does not mean 24/7 support with instant question response. Course support is by several means:

- **Your peers:** Discussion forums are used to facilitate group discussion by posting discussion questions or by responding to questions from the class. If you have a question, it is likely that others might have a similar one as well and would benefit from the discussion of it. I will be participating to answer questions that cannot be resolved through peer discussion, but I expect you to try to help each other in this online format just as you might in a face-to-face class discussion.
- **One-on-one help through email, telephone, and video conferencing consultation:** I check my mail frequently and respond as soon as possible. That will usually mean the same day, but my goal is always within 24 hours.
- **Don’t forget face-to-face help:** I can always schedule office meetings to meet with you or small groups on request.
- **Adobe Connect:** This video conferencing system allows us to talk and share desktops. It requires you have at least a headset microphone; a webcam is optional but desirable. Video conference session meetings will be posted periodically or arranged on request.
- **Online sources:** Many tutorials have been pointed to and the UK EVC training site is also a useful resource.
- **BlackBoard help:** Through the UK helpdesk system. There is also a wiki for BlackBoard at [http://wiki.uky.edu/blackboard/Wiki%20Pages/Home.aspx](http://wiki.uky.edu/blackboard/Wiki%20Pages/Home.aspx).

Email
It is essential that we can depend on effective email communication. Some personal email accounts can run into problems with the UK mail spam filtering system. Therefore, if you email me directly and do not receive a timely reply, you should follow up with me in some alternate way (e.g., phone call or a post to the BlackBoard course issues forum). Also, **please include “636-201/202” as the first part of the subject line of email correspondence to me related to the course.**

Adobe Connect
Adobe Connect, a web conferencing tool. You can access a virtual meeting room via an URL that I will provide for such optional meetings and office hours. There is an introductory video on this tool in BlackBoard.

Expectations
*What I expect from you:*
- You have thoroughly read this syllabus and understand the expectations for this Internet based class, including the need for a reliable computer and Internet connection and required software.
You will keep track of all posted deadline dates and times.
You communicate any special needs or issues that might need accommodation in a timely fashion.
You will check your email and BB announcements regularly throughout the course.
You will take advantage of alternate communication strategies as needed.
You will engage the quizzes on your own without consulting other resources. While collaborative work on content questions and project work is fine, quizzes are an individual assessment.

What you can expect from me:

I will present an online class that is comparable to the face-to-face version of 636 using tools that attempt to accommodate multiple learning styles.
I will attempt to respond to all direct queries within 24 hours or less.
I will provide graded feedback on projects no later than 48 hours after the due date.
I will pose discussion questions for each module that will frame our use of the discussion boards and that I will monitor the discussion boards and add comments when appropriate.
I will arrange face-to-face meetings or video conference sessions as needed and on request.

Attendance and Participation Policy
As a fully online course, there are no face-to-face attendance requirements. However, I define “attendance” for us in terms of how often you login and engage the BlackBoard course. Ideally, you should be logging in and engaging the course several times each week. Note that failure to login at all during a module will result in zero participation points for that module. Failure to login at all for two or more modules during the semester will result in the loss of all participation points for the course.

Review questions
Optional review questions are provided at the end of each module. If you want feedback on these, they must be submitted by noon on day the module ends (the time the quiz launches for each module) in the form of an email message directly to me (jbmiller@uky.edu). Answers should be in the body of the message, not as an attached file to facilitate a quick response to you with comments if needed. Review questions are intended to reinforce module content and to help you prepare for quizzes. You do not have to submit these if you do not have questions about your responses.

Late assignments
Assignments are due at on the dates and times specified in our calendar. Each project is due on the day designated. Late assignments will have an automatic 10% deduction if turned in late up to 48 hours late. Assignments beyond 48 hours late will not be accepted unless there are documented extenuating circumstances such as an illness or
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family emergency. Each assignment will have directions about the appropriate way it is to be submitted; projects must submitted as described to be accepted.

Plagiarism and Cheating
Plagiarism and cheating will not be tolerated. The University of Kentucky has established rules concerning these issues. Please note the penalties described for these violations documented on the UK website.

Diversity in LIS
All UK professional education programs address and affirm the value of diversity in education, the use of technology to support all aspects of instructional programming, and the importance of attaining high levels of skill in assessing the outcomes of instruction. This course will provide students an opportunity to demonstrate attention to these themes and reflect on the mechanisms that this course has provided to demonstrate improved skills in these areas.